Consumer Product SAFETY ALERT

FROM THE U.S CONSUMER PRODUCT SAFETY COMMISSION, WASHINGTON, D.C 20207

July 1991

Prevent Electrocutions:

Install Ground-Fault Circuit-Interrupter Protection for Pools, Spas, and Hot Tubs

The U.S. Consumer Product Safety Commission (CPSC) recommends the installation of ground-fault circuit-interrupter (GFCI) protection for consumers against electrical shock hazards in pool underwater lighting circuits and in electric circuits of spas and hot tubs.

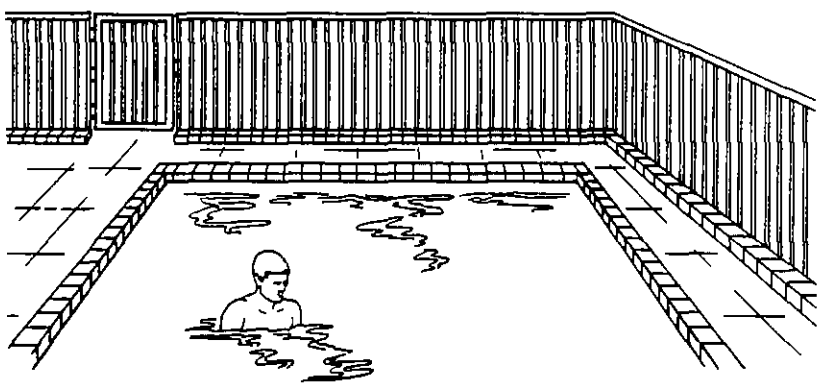
CPSC is aware of three recent electrical shock incidents involving the electric heater circuits of spas or hot tubs. Recently, a maintenance worker was electrocuted while repairing a pool light fixture

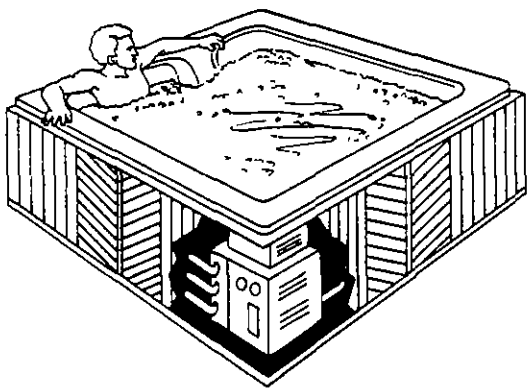
A GFCI constantly monitors current flowing in a circuit to sense any loss of current If the current flowing through two circuit conductors differs by a very small amount, the GFCI instantly interrupts the current flow to prevent a lethal amount of electricity from reaching the consumer. The consumer may feel a painful shock but will not be electrocuted

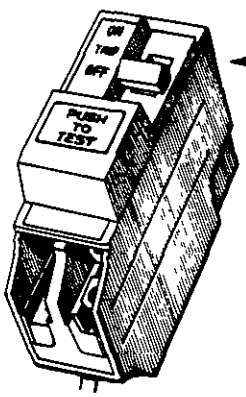
The National Electrical Code provides for GFCI protection for cord-and-plug connected spas and hot tubs, and for lighting fixtures and receptacle outlets in the vicinity of pools, spas and hot tubs However, the code does not require GFCI protection for all electrical equipment, particularly 240 volt equipment Older pools, spas and hot tubs may not have adequate GFCI protection. In particular, pools older than 10-15 years may not have GFCI protection on underwater lighting circuits Underwater swimming pool lighting fixtures and spa/hot tub heaters are a potential source of electrocution Both 120 volt and 240 volt circuits should be protected by GFCIs

Although grounding may provide some protection for pool, spa, and hot tub equipment, GFCIs are the most effective means for protecting consumers against electric shock hazards.

CPSC urges consumers to have an electrician install adequate GFCI protection for all spa and hot tub electrical equipment and for underwater swimming pool lighting fixtures







Circuit Breaker Type GFCI

ELECTROCUTION HAZARD

- **Install a GFCI on underwater light circuits operating at more than 15 volts.**
- **Install a GFCI to protect all electrical equipment used with spas and hot tubs, including spa and hot tub heaters with 240 volt circuits.**

GFCIs should be installed in accordance with the National Electrical Code.